

Membrane contactors for degassing liquids

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Industrial Water Ltd.

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Industrial Water Ltd.

Water Treatment
Technology

Project Management

Process Chemistry and
laboratories

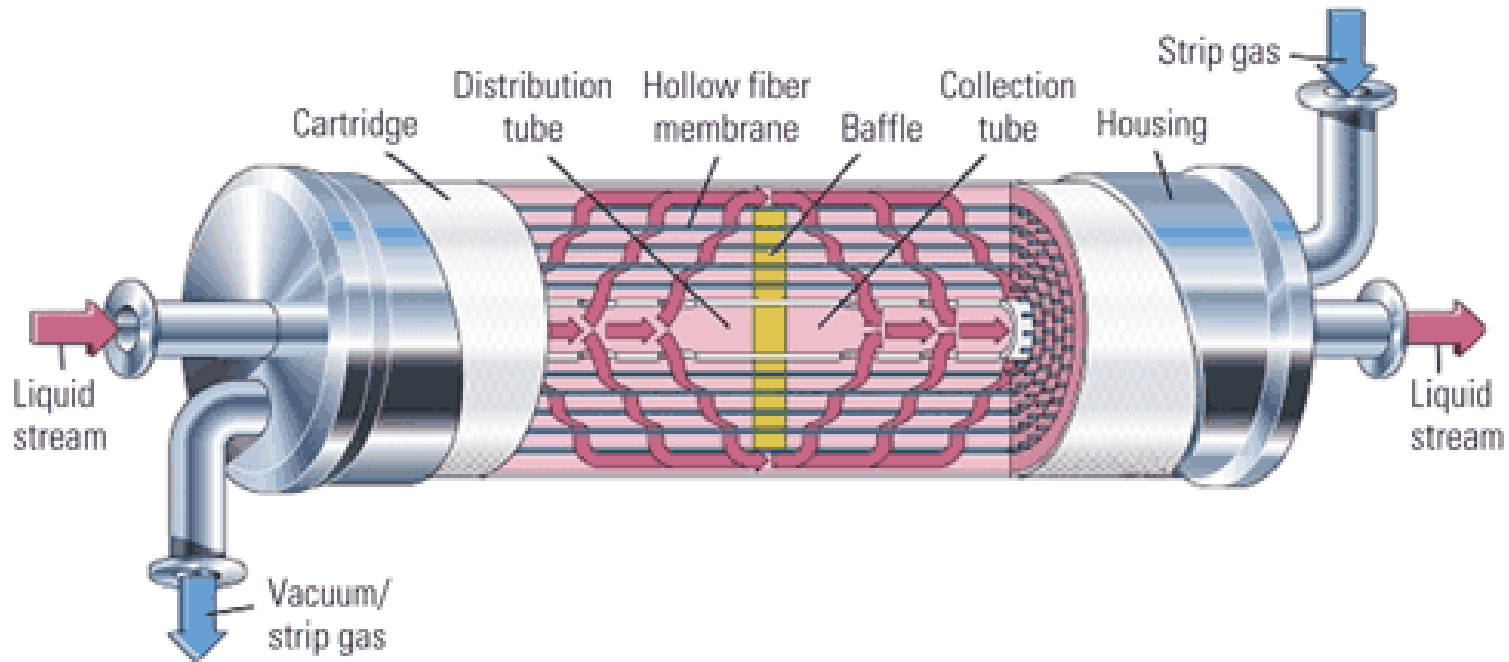
Service and Pilot
Tests

**Chemistry +
Microbiology +
Process technology = Industrial
Water Ltd.**

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Membrane contactors - Principle

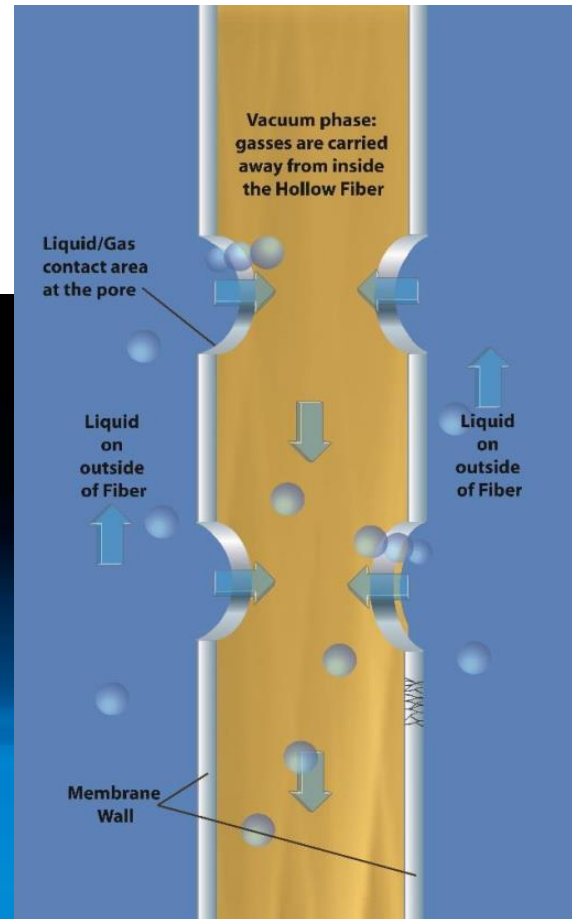


Liqui-Cell™

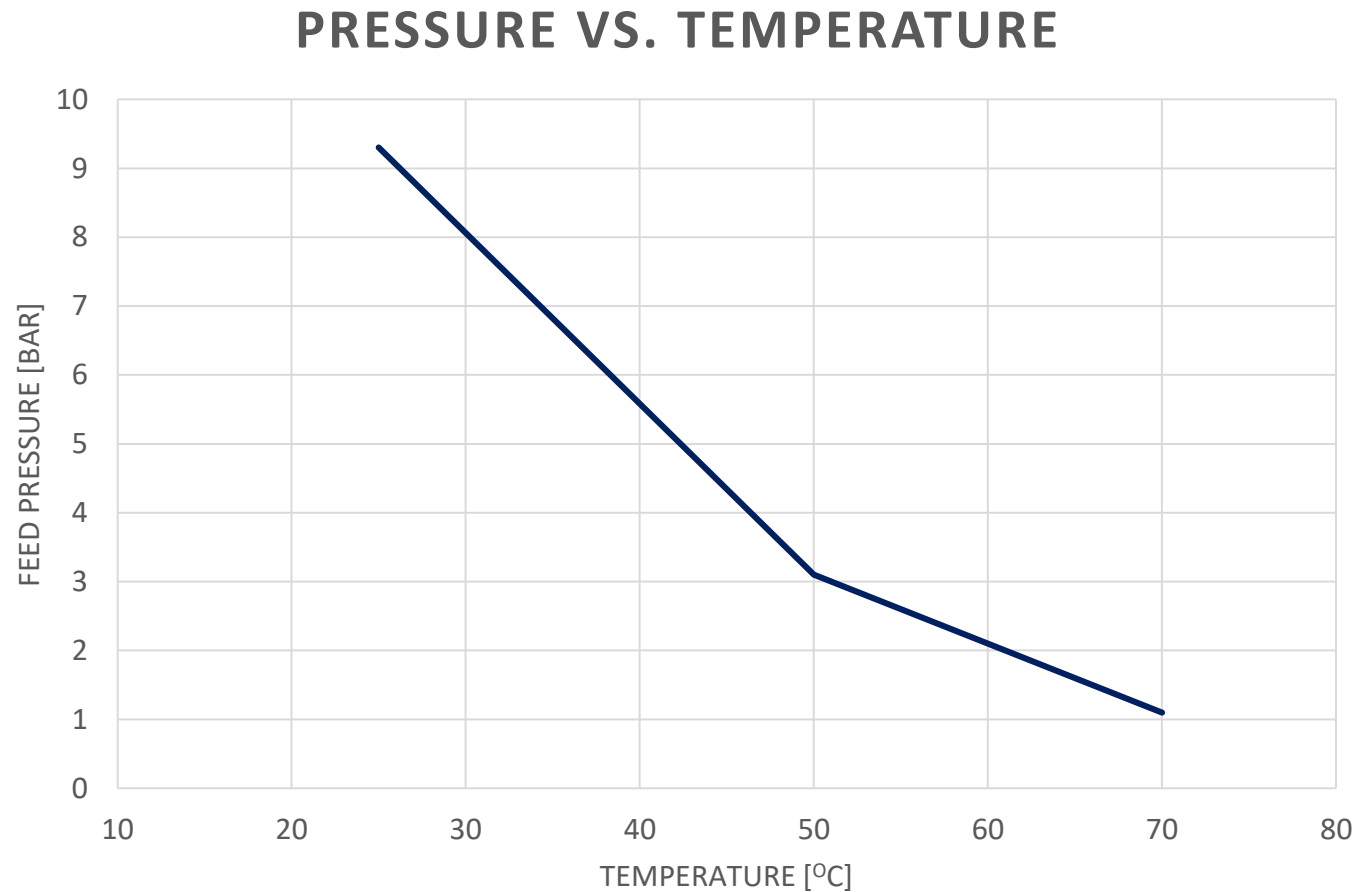
Membrane contactors - Principle

- Hollowfiber element → high specific surface area 53 m²/element
 - Prefiltration 5 micron absolute
- Polypropylene fibers (hydrofobic)
- Process mode
 - Sweep Mode
 - Vacuum Mode
 - Combo Mode
 - Blower Mode
- Combo mode: vacuum 67 mbar and flow 200 l/h

Membrane contactors - Principle

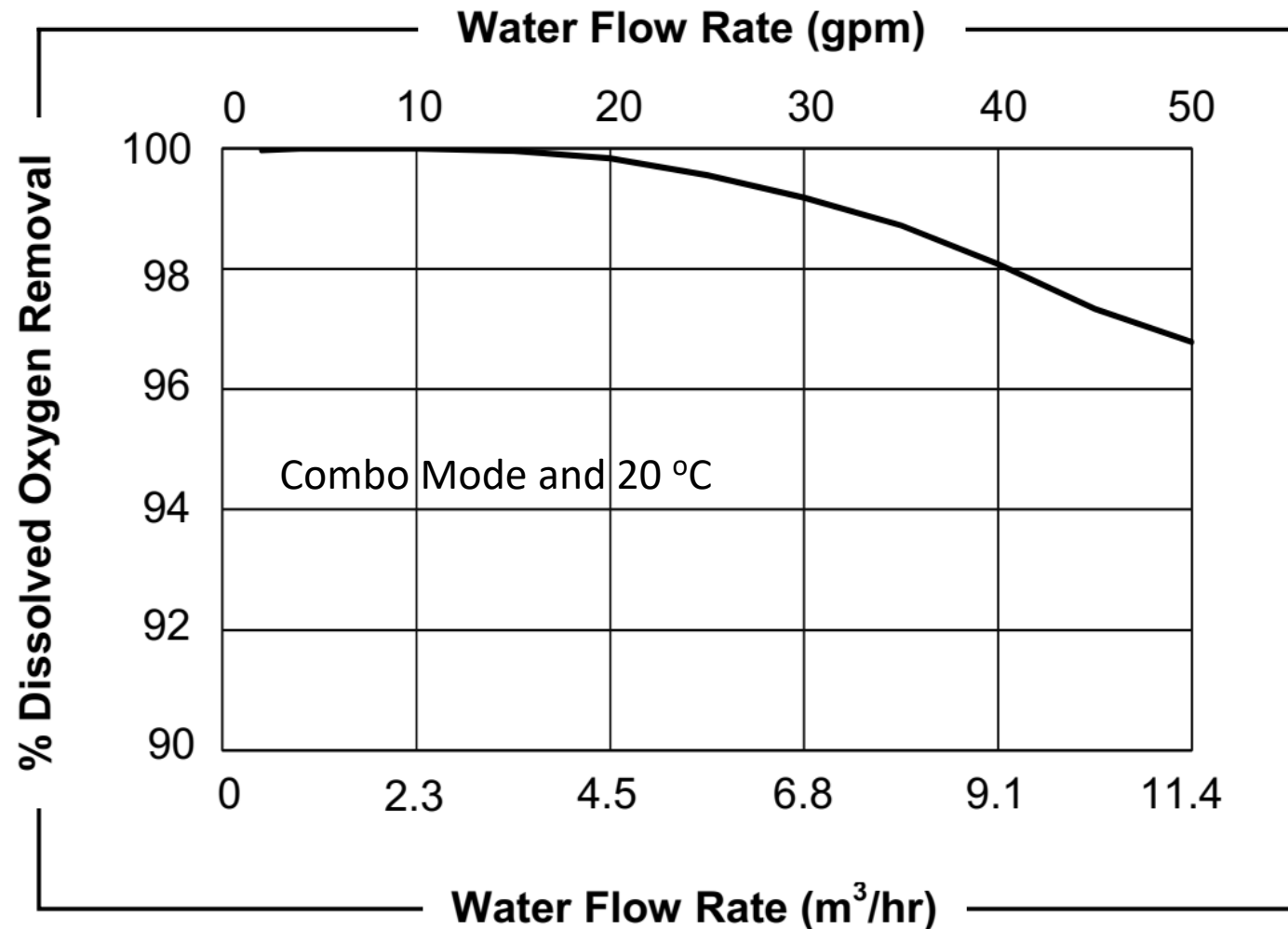


Membrane contactors – Operating parameters

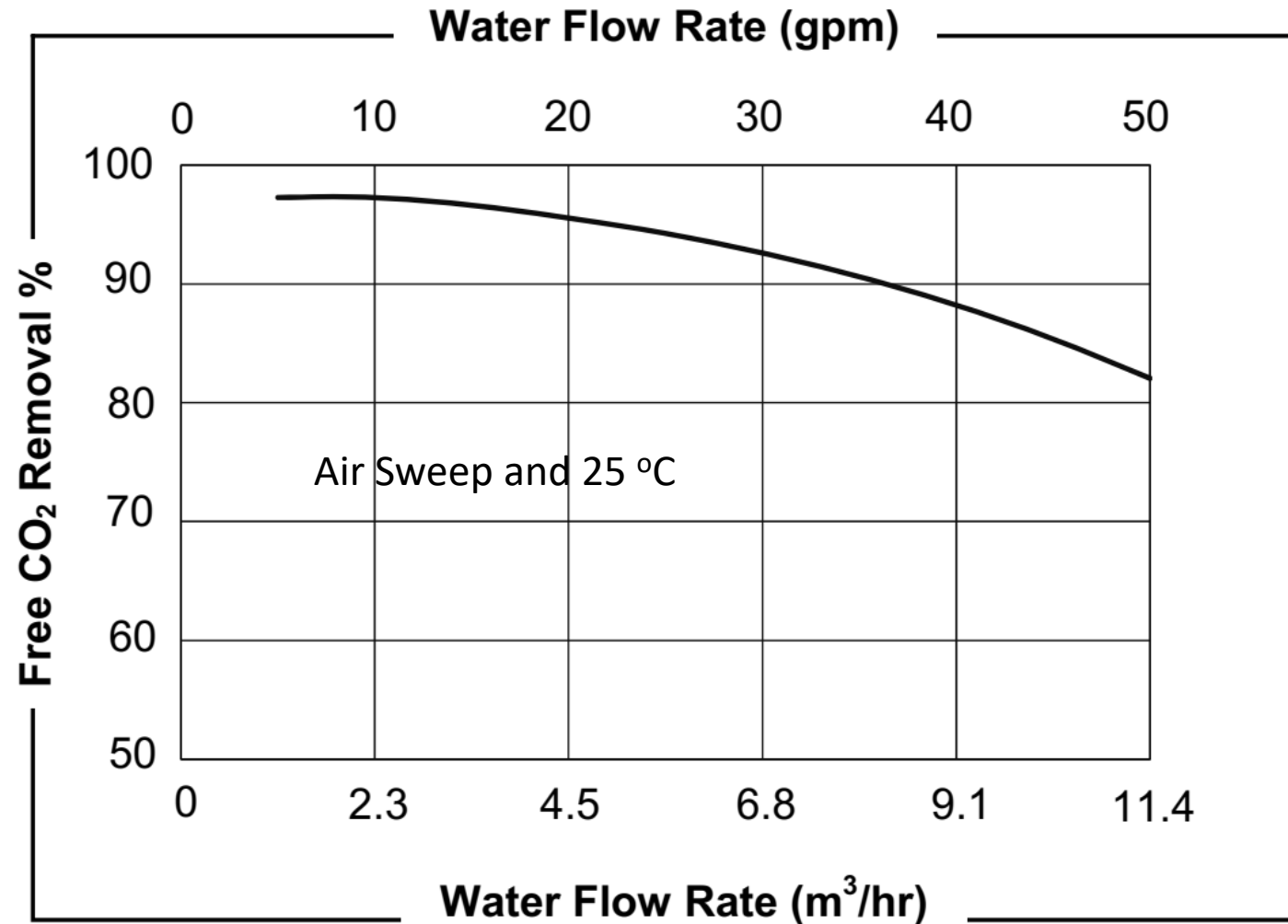


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Membrane contactors – Operating parameters



Membrane contactors – Operating parameters

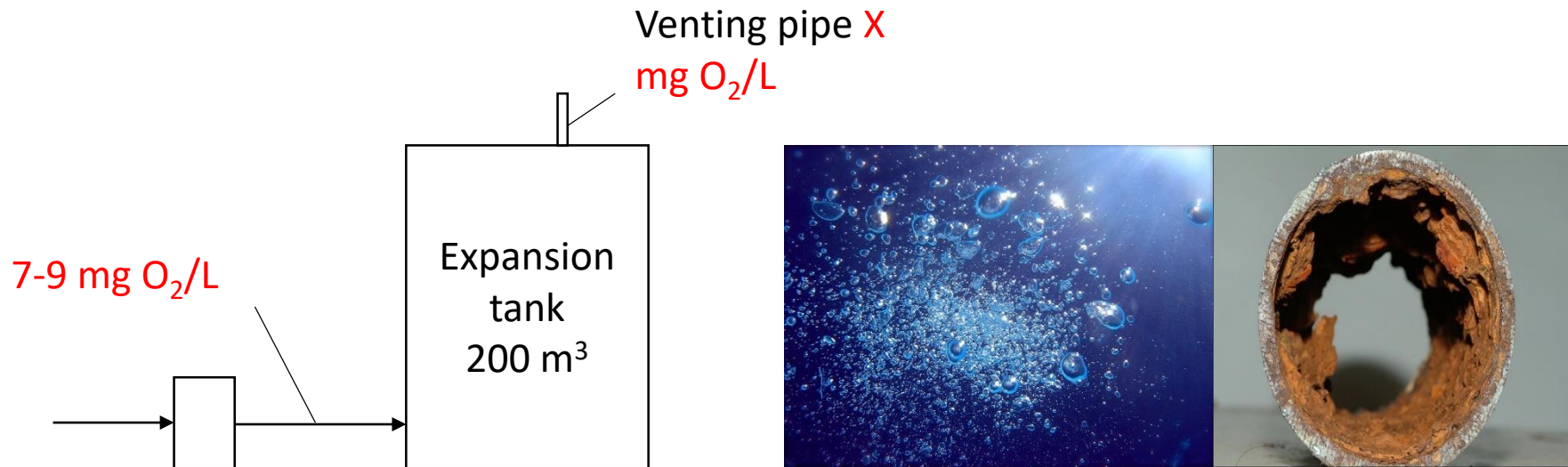


Case project

Hyvinkään Lämpövoima, Finland

District Heating Plant

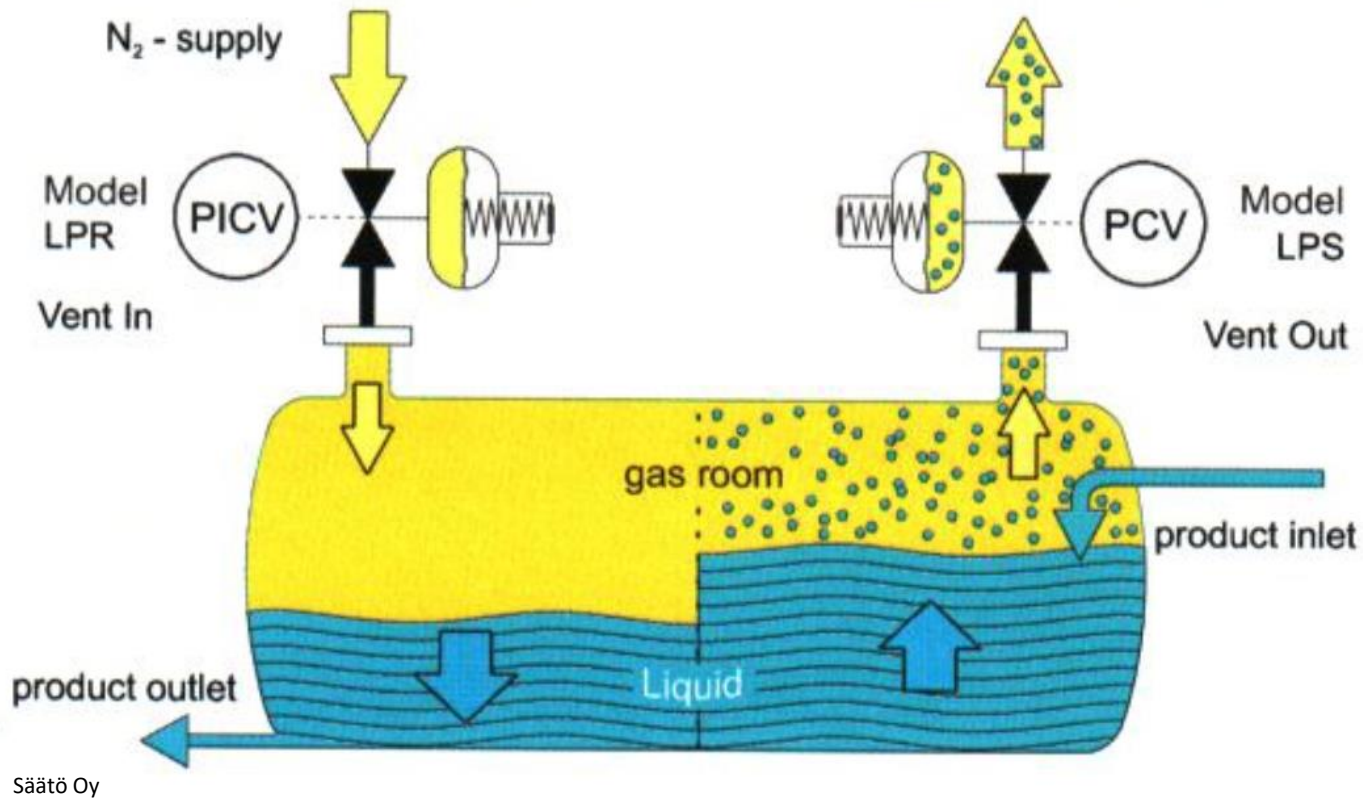
Case project – Starting point



Case project – Nitrogen production and nitrogen gas room control



Case project – Nitrogen production and nitrogen gas room control



Summary

- Chemical dosing decreased
- Low OPEX
- Residual O₂ level < 0,1 mg/l
- Reliable and simple structure



THANK YOU

Questions?

For more information, contact ville.rantanen@teollisuudenvesi.fi or check out our website at www.teollisuudenvesi.fi